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United States
Department of
Agriculture

**Forest
Service**

Washington, D.C.

Report of the Forest Service

Fiscal Year 1979 Highlights

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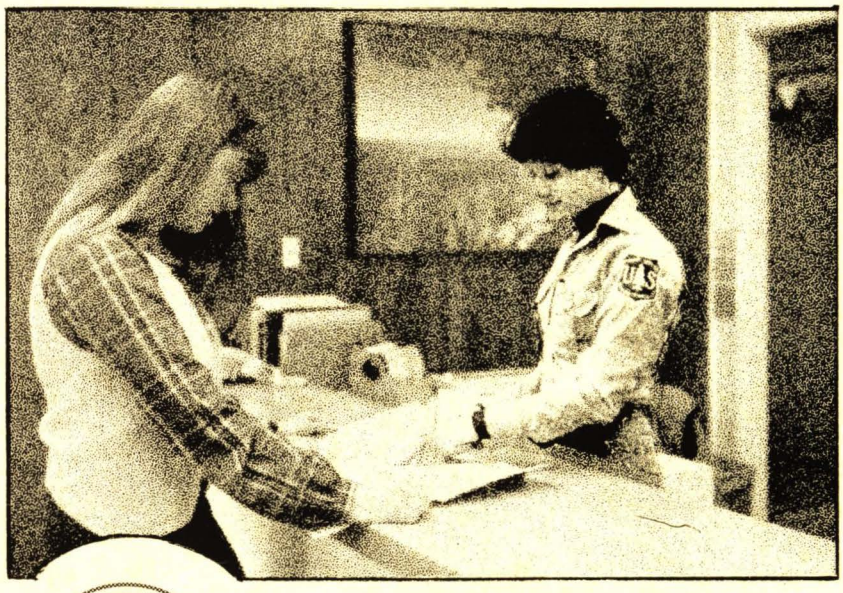

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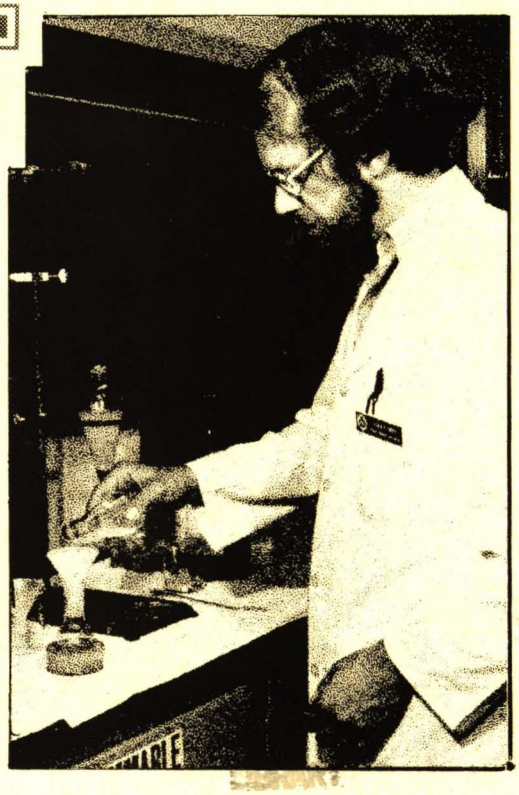

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Resources Planning Act

In 1974, Congress enacted legislation to provide long-term planning for the Nation's renewable resources. The Forest and Rangeland Renewable Resources Planning Act (RPA) directs the Secretary of Agriculture to assess the national situation for forest and rangeland resources every 10 years, and to submit recommendations for long-range Forest Service programs essential to meet future needs of the American public every 5 years. The program recommendations are to cover all the activities of the Forest Service.

The Forest Service, U.S. Department of Agriculture, is responsible for Federal leadership in forestry and carries out this role through four main activities:

- Research on all aspects of forestry, rangeland management, and forest resources utilization;
- Cooperation with State and local governments, forest industries, and private landowners to help protect and manage non-Federal forest and associated range and watershed land;
- Protection and management of resources on 187 million acres of National Forest System lands; and
- Participation with other agencies in human resource and community assistance programs to improve living conditions in rural areas.

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Overview

This report highlights Forest Service accomplishments during fiscal year 1979 and measures them against the goals established by the 1975 RPA Program. In developing the 1975 RPA Program, all Forest Service management activities were grouped into six "resource systems"—outdoor recreation and wilderness, human and community development, wildlife and fish, timber, range, and land and water. Each of the six included those research, cooperative, and National Forest system activities that applied to that system. A goal was selected for each system and targets established that could be used to measure progress toward meeting the goal.

Generally, the accomplishments continue to be below the program trend lines projected in the RPA for the fiscal year 1976-1980 period. However, accomplishments met or exceeded most of the funded targets for fiscal year 1979. The data reflect a growing interest in the use of National Forest System lands for products and amenities, in the application of Forest Service research to promote the wiser utilization of forest resources, in the use of Forest Service technical assistance in efforts to improve the management of private nonindustrial forest and range lands, and in the participation in programs to help develop human and community resources across the country. Some accomplishments that affect, or result from, the entire Forest Service program are highlighted below.

- Forty-three States and Puerto Rico, which contain National Forest System lands, received $279 million as their shares of Forest Service receipts derived from the income for resource use and extraction.
- Completing the National Forest System Roadless Area Review and Evaluation (RARE II) resulted in recommendations to double the National Forest portion of the National Wilderness Preservation System while providing for meeting the needs for other goods and services from the National Forest System.
- Publication of the National Forest System land and resource management planning regulations will allow for more integrated management of all the forest resources and make it possible to accelerate timber harvesting where appropriate to help meet the President's call for actions designed to lower housing prices.
- Strengthening the HOST program has increased our service to the public. The HOST program is designed to assure that all Forest Service employees will provide responsive and courteous service in all their dealings with the public. Training modules to help our employees interact better with the public are being developed.
- The 1980 RPA Assessment of the supply of, and demand for, renewable resources was completed this year and final touches were being put on the Recommended RPA Program for 1981 through 1985.
- During the year, we set forth a brief "forestry agenda" of goals to help meet the increasing public needs for natural resources in the coming decade. These goals outline general activities that will strengthen our ability to meet the objectives set forth in the RPA Program.
- Protection of the Nation's cultural heritage moved ahead with the appointment of a Forest Service program coordinator and publication of draft procedures to insure that these resources are considered in plans for utilization of other forest resources.
- Some 980 scientists conducted research on more than 3,000 individual studies on all aspects of forest and rangeland utilization and management during the year.
- Development of a bibliographic data base named CORR (Communications on Renewable Resources) will improve the transfer of knowledge and technology to the using public.
- Forest Service funds allocated to the States resulted in a doubling of the number of State planners working on State Forest Resource Plans. All States are expected to complete plans by 1983.

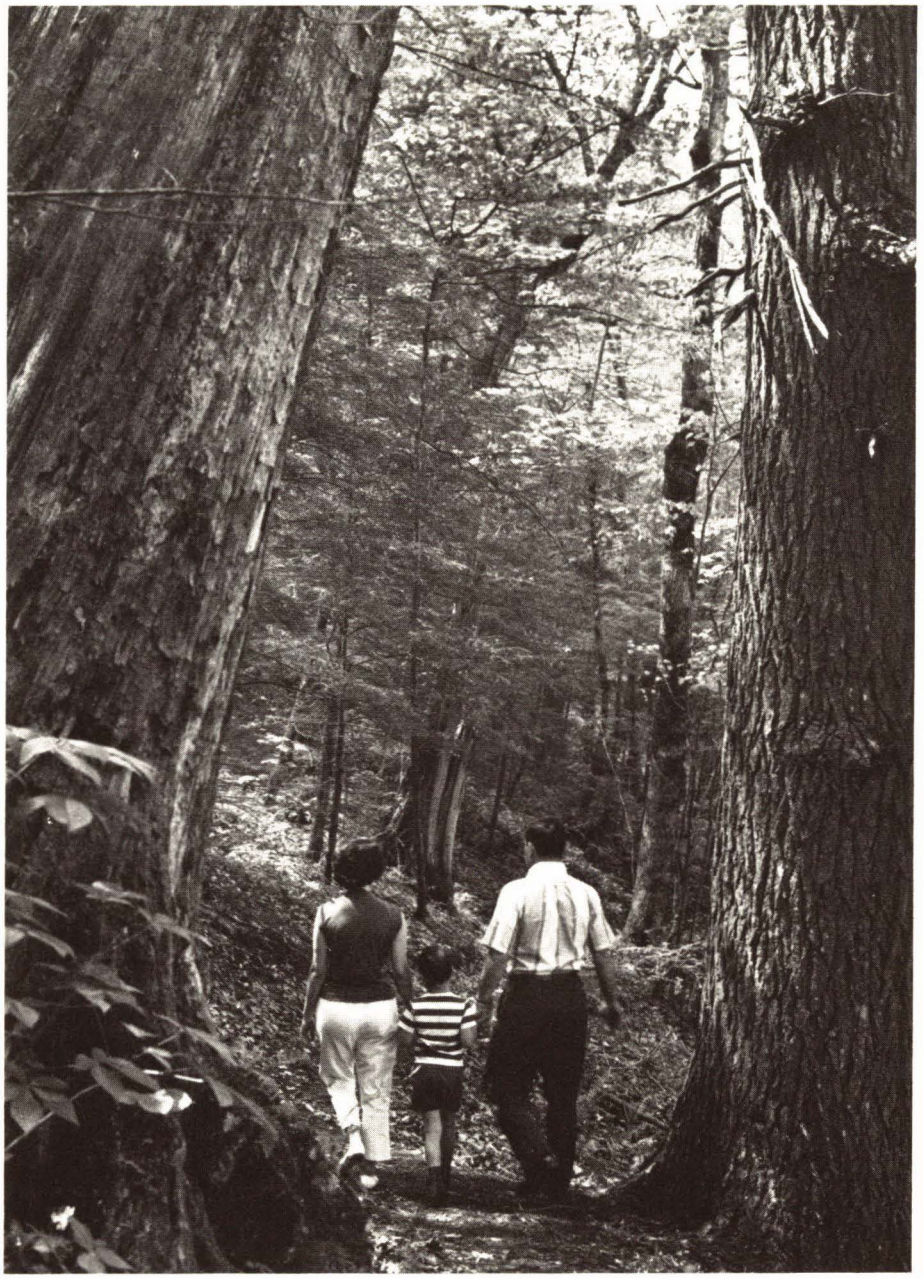
The following chapters highlight accomplishments in each resource system for fiscal year 1979 and show to what extent the RPA targets were met. Additional tabular data is in the appendix.

Recreation and Wilderness

". . . to provide outdoor recreational opportunities and wilderness for the Nation."

The Forest Service's commitment to providing quality recreation opportunities, and especially dispersed recreation possibilities near urban areas, was perhaps best expressed through the work on National Recreation Trails. President Carter, in his 1979 Environmental Message, called for achievement of a goal of 244 such trails on the National Forest System by January 1, 1980. This goal was exceeded, with 256 trails totalling some 2,986 miles designated by year's end. These trails are frequently near large concentrations of people and are designed for all types of recreation. Most of the trails are for foot traffic but some provide for bicycles, horses, snowmobiles and other off-road vehicles, and cross-country skiing. There are trails designed for wheelchairs and some with braille markers and natural wonders that can be touched, smelled, or heard by the blind. The trails range in length from 1/4 mile to 200 miles and are located in 36 States.

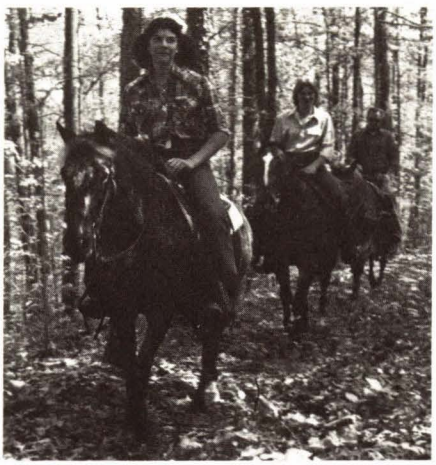
The National Recreation Trails are part of the 98,000-mile trail system now in place on National Forest System lands. The RPA goal calls for 120,000 miles of all types of trail by the year 2020. Hiking, horseback riding, and other activities on trails are just some of the ways trails help provide dispersed recreation. Trails also help people reach other undeveloped areas such as lakes or streams. The 138.3 million recreation visitor-days of dispersed recreation on the National Forests represented a slight drop as compared to last year, but it was near the top end of the RPA range of expected use. (An RVD is 12 hours of recreation use by one person or some other combination of people and time such as 1 hour by 12 people.)



National Forest trails provide quality recreation near urban areas.

Recreation at National Forest developed sites was slightly higher than the RPA estimate. The 81.9 million RVD's took place at 4,802 campgrounds, 1,531 picnic sites, 311 swimming sites, 963 boating sites, 637 interpretive sites, 464 observation sites, and 199 miscellaneous sites.

Off-Road Vehicle (ORV) plans were implemented on 98 percent of the National Forest System lands, and plans for the remainder are pending. Sixty-six percent of the lands were designated open to ORV



The Forest Service trails provide many types of recreation.

Off-road-vehicle plans were implemented on 98 percent of the National Forest System lands.

Four new units of the Wild and Scenic River System were added during the year bringing the Forest Service total to 15.

use, 13 percent were restricted to specific types of vehicles or use during specific seasons, and the remainder were closed to ORV's.

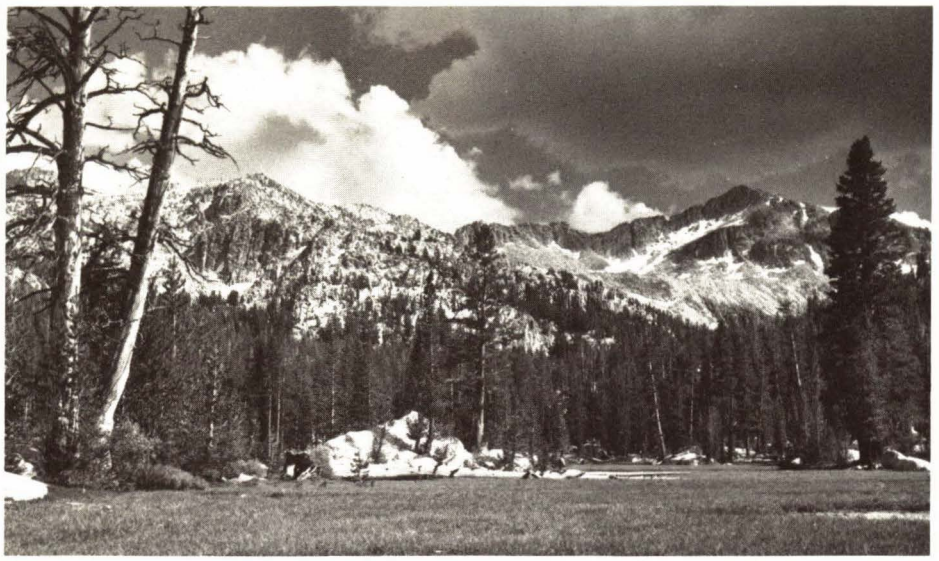
About 475,000 acres of National Forest System land were added to the National Wilderness Preservation System in 1979, bringing the National Forest portion of the System to 15,257,135 acres or about 80 percent of the total Wilderness acreage. As a result of RARE II, President Carter recommended that another 15.4 million acres of the National Forest System be added to Wilderness. If designated by Congress, these additional acres would bring the Forest Service total to more than 30 million acres, the top end of the 1975 RPA Wilderness goal for the year 2020. During the year, Wilderness use increased to 9.6 million visitor-days, 35 percent more than the RPA estimate.

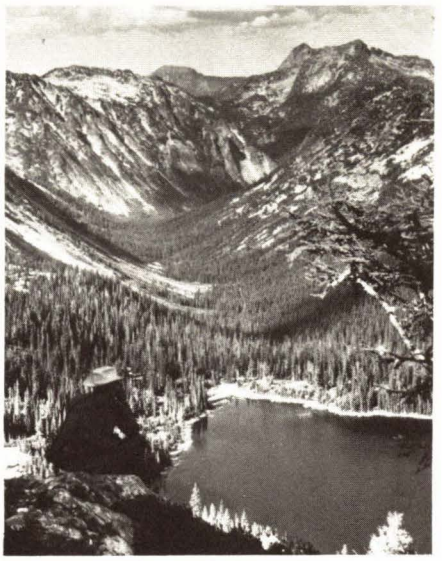
Four new units encompassing 129 miles were added to the Wild and Scenic River System within the National Forests. This brings the total to sections of 15 rivers (886 miles) in the National Forests. Recreational use of these rivers totaled 1.2 million visitor-days during the year.

State and Private Forestry funds were used for the development of 270 acres of recreation areas on watershed protection projects this year. In addition, cooperative foresters assisted landowners with projects to make 72,000 acres of private land more useful to people participating in dispersed recreation activities such as hiking, hunting, or fishing.

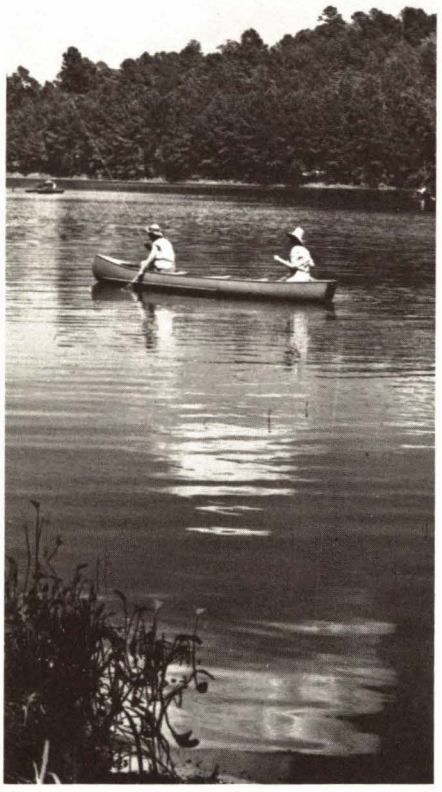
Scientists at the Rocky Mountain Forest and Range Experiment Station conducted research into why people decide to participate in different types of recreation. This work led to development of a system that can be used to map and manage public lands for specific types of recreation. The system has been adopted nationwide by both the Forest Service and the U.S. Department of the Interior's Bureau of Land Management.

See tables 1, 4, 5, and 6.





About 80 percent of the Nation's designated Wilderness is on National Forest System lands.



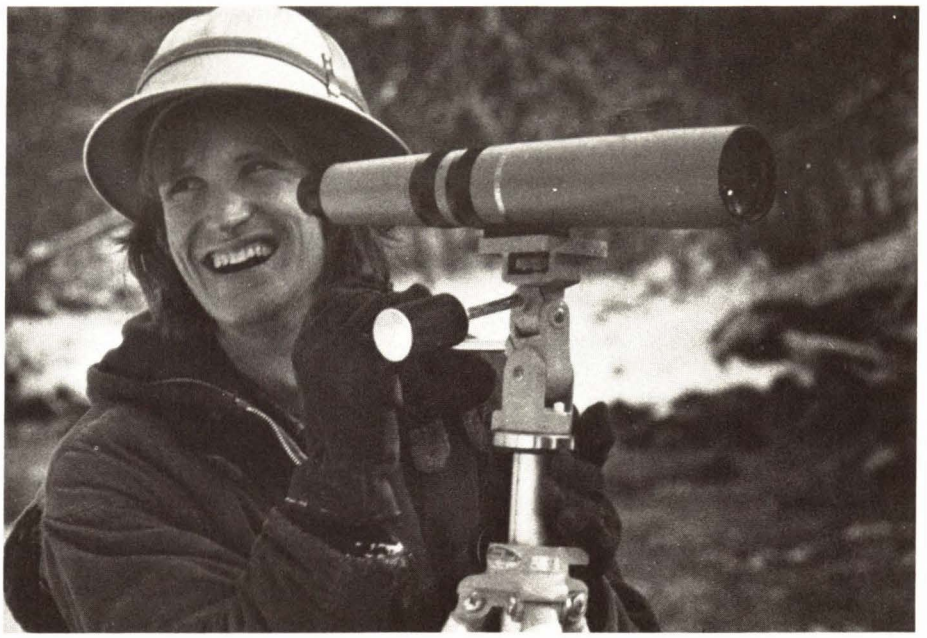
From motorboats to canoes or from hiking to hunting, all types of recreation are available on National Forest System lands.

Research conducted by the Forest Service will help better manage land for specific types of recreation.

Human and Community Development

"to help people and communities to help themselves."

During the year, the Cascades Young Adult Conservation Corps Center was dedicated at Sedro Woolley, Washington. It is the largest YACC Center in the United States with a capacity of 400 enrollees who will live, work, and train at the site. The Center occupies the former Northern State Hospital, a complex which had been closed since 1973 but was revitalized through the work of the YACC enrollees. The campus will be known as the Northern State Multi-Service Center and will serve several community programs in addition to the YACC. Part of the Center's activities will include evening classes in cooperation with the Skagit Valley Community College. This Center is a prime example of how joint efforts between the Forest Service and local communities can result in programs that benefit people, the Service, and the community.



YACC enrollees provide valuable services. Here an eagle census is being taken to learn more about that endangered species.

The Young Adult Conservation Corps is just one of the programs in which the Forest Service participates to serve unemployed, underemployed, minorities, economically disadvantaged, youth, and the elderly through forestry activities. These programs provide skills training, experience, and education as well as employment. The efforts of enrollees in these programs contribute substantially to the improvement of Forest Service recreation facilities and other installations, to the management of public forest and range lands, and to the provision of resource benefits to the using public.

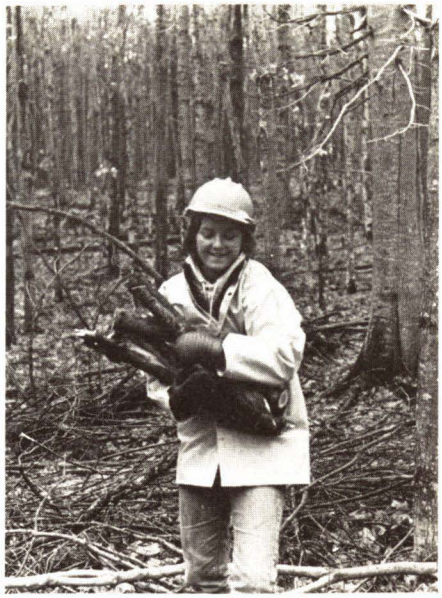
During the fiscal year, $156.9 million was used to fund four major programs: The Young Adult Conservation Corps, Youth Conservation Corps, Job Corps, and Senior Community Services Employment Program. These programs provided training and employment for 78,325 people. The work these people performed was valued at $164.1 million. In addition, the Forest Service administered Young Adult Conservation Corps and Youth Conservation Corps programs funded through State grants. Also, 12,294 persons participated in the Volunteers in the National Forests program, without compensation, and 11,756 persons took part in cooperative activities such as the College Work Study, Work Incentive, Vocational Work Study, and Comprehensive Employment and Training Act programs.

A Forest Service cooperative program provides communities assistance on projects to control Dutch elm disease and use the dead trees for wood products. This program has resulted in demonstration projects in 42 towns and cities in five States. These projects are showing that Dutch elm disease can be reduced and that there are various ways for using trees killed by the disease.

About $496,000 of State and Private Forestry (S&PF) funds went to local sponsors of 59 Resource Conservation and Development Areas to help improve local economic, environmental, and social well-being through accelerated resource development and planning such as studies of wood as an energy supplement, reforestation, management, and utilization with emphasis on multiple use.

State and Private Forestry personnel conducted wood energy training sessions in several States during the year. These sessions helped transfer knowledge about wood's heating properties, burning methods, and other wood energy considerations. The Cooperative Forestry staff also provided funding, training, and technical assistance to State forestry personnel for conducting wood energy surveys in States and cities. This resulted in a survey in San Francisco that can be used as a model for other cities to determine the amount of wood residues being

Assistance to communities helps in many projects, such as efforts to control Dutch elm disease.



Forest Service assistance helps provide wood fuel for elderly citizens as well as providing information for anyone using wood for heat.

generated, a survey in the State of New York on the amount of wood residues available from land clearing projects, and work in the State of Maryland to identify public institutions and other plants that could convert to wood as an energy source. The same type of S&PF assistance in the State of Vermont has resulted in a draft report on whole tree harvesting to produce wood chips.

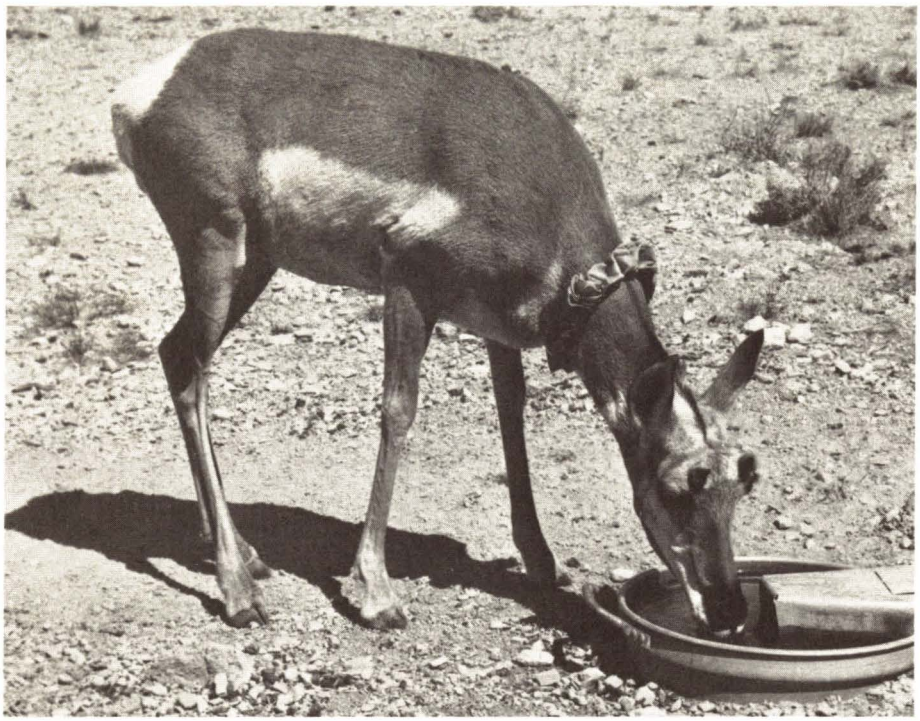
The demand for Cooperative Forestry to assist with improvements in the care and use of trees in urban areas was nearly four times greater than what was estimated by the 1975 RPA.

See tables 1 and 3.

Forest Service human resources programs serve senior citizens as well as young adults.

Wildlife and Fish

". . . to provide productive wildlife and fish habitat, with special emphasis on threatened and endangered species."



Research showed that watering sites may be the crucial factor in expanding antelope herds.

Research is one of the keys to managing wildlife habitat.

Better water availability will distribute the antelope herds and make the young less subject to predation.

Research is one of the keys to managing wildlife, for it can identify critical considerations and point up management techniques that will benefit all resources. A good example is a series of studies on antelope conducted by researchers from the State of Utah and the Forest Service's Intermountain Forest and Range Experiment Station. The scientists found that poor distribution of watering sites was the major reason antelope did not occupy much of the range otherwise suitable for them. The researchers demonstrated that making more watering sites available during fawning season helps distribute the antelope herds. This may reduce the number of fawns killed by predators, one of the primary reasons for slow growth of the antelope population. The State of Utah is applying this research by constructing rainwater catchments and other water sources.

The foregoing research is just one example of Forest Service efforts to meet the RPA goal for wildlife and fish by providing for greater species diversity, protection of endangered and threatened species, and increased wildlife and fish populations through a substantial increase in habitat management. The funded targets on National Forest System lands of 778,000 acres for wildlife habitat improvement and 17,000 acres for fish habitat improvement were exceeded during the year by 22 and 41 percent, respectively. Although appropriations for the fiscal year were below what was required to meet RPA targets for habitat improvement, work accomplished with other funds helped us exceed the goals.

Hunting and sport fishing on National Forest System lands in 1979 totaled 32,104,000 recreation visitor-days. The value of wildlife and fish for appreciative use such as nature study cannot be separated from other recreation activities.

Efforts to save the Puerto Rican parrot from extinction are underway.

Private landowners are showing increasing interest in wildlife habitat management. Accordingly, State and Private Forestry programs are placing more emphasis on this activity. Forest Service personnel provided technical assistance affecting more than 218,000 acres, 56 percent more than the funded goals.

Work to inventory and monitor, manage the habitat of, and analyze the effect of Forest Service activities upon some 70 threatened and endangered wildlife and plant species continued. Examples are the development of predator-proof nesting structures and a foster parent program for raising Puerto Rican parrots conducted by the Forest Service and Fish and Wildlife Service on the Caribbean National Forest in Puerto Rico. These efforts may help bring this bird back from the brink of extinction.

A new system to analyze the impact of forest management decisions on wildlife habitat has been developed. The system uses a computer model to predict what will happen to wildlife populations as the environment is changed through use of the other forest resources. It allows managers to test tradeoff decisions before actually making changes in the environment. An Agriculture Handbook, *Wildlife Habitats in Managed Forests: the Blue Mountains of Oregon and Washington,* has been published to disseminate the technique.

See tables 1 and 4.

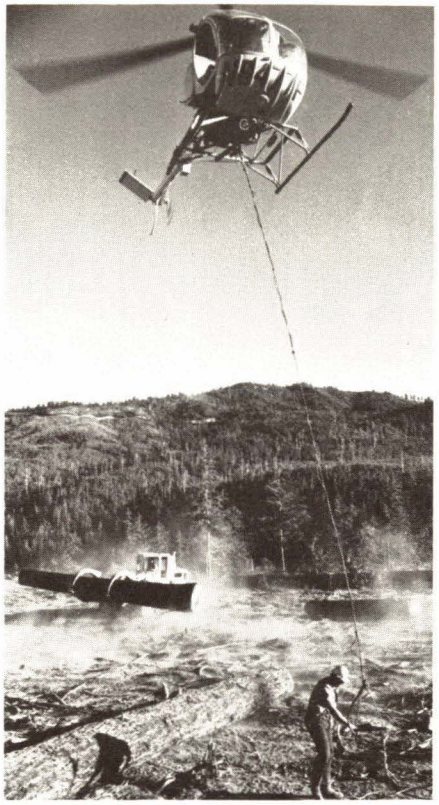
Computer systems to analyze the impact of forest management decisions on wildlife have been developed.

Timber

". . . to enhance the growth, utilization, and utility of wood and wood products to help meet the Nation's short- and long-term needs."

The reliance on the renewable resources of the Nation's forest and range lands to provide for the needs of the public was perhaps best demonstrated by the growth of interest in the Forest Service's free firewood program. Under this program, individuals can obtain permits to cut, free-of-charge, dead timber for their personal use as firewood. As a consequence of the rapidly increasing cost of fuel oil and natural gas for home heating during the year, some 700,000 families collected a total of 3.2 million cords of free firewood from National Forest System lands. This was about 33 percent more wood than was collected last year. This firewood would make a pile 4 feet high, 4 feet wide, and 4,848 miles long. It will provide the heating equivalent of 7 million barrels of oil.

The timber sales and management program accomplished the 12.4 billion board feet timber sales target funded by Congress. This was 1.7 billion board feet below the range of the timber sale goal set forth in the RPA, however. In addition to funding limitations, reduction in land base and changes in land designation are major reasons for not meeting the goals established by the 1975 RPA Program. The Pilot Salvage Sale Program for small loggers has worked well, with 52 million board feet sold. Plans are to expand this program.



About 12.4 billion board feet of timber were sold from National Forests during the year.

As of the end of the fiscal year, 1.6 million acres of National Forest lands needed reforestation; a 25 percent reduction from the acreage needing reforestation at the end of fiscal 1978. More than half of this acreage to be reforested is work that has existed for a number of years as the result of wildfires and other causes. This year, 446,000 acres were reforested using both appropriated funds and money set aside from timber sales under the Knutson-Vandenberg Act.

The Forestry Incentives Program (FIP), administered by State and Private Forestry, supported 329,600 acres of reforestation and timber stand improvement on private, nonindustrial forest lands. This was the largest single-year accomplishment in the program's 6-year history. Demand for FIP practices has increased almost threefold over our ability to meet that demand. The forestry aspects of the Agricultural Conservation Program, jointly administered by the Forest Service and the Agricultural Stabilization and Conservation Service, were responsible for 113,353 acres of reforestation and timber stand improvement during the year. This also is the largest yearly accomplishment since 1974 and it represents a 50 percent increase over last year.

As part of the Agricultural Conservation Program, a pilot fuelwood project was established in selected counties in four New England States. By the end of the fiscal year, the program had proved so valuable that it was being expanded to all the

This year, 446,000 acres of National Forest System land were reforested.

Research on sex pheromones systems has resulted in an effective control system for the Western pine shoot borer.

counties in the original States and into two more States. This program is expected to yield 80,000 cords of fuelwood while implementing sound silvicultural practices on 10,000 acres of timber stands held in small nonindustrial private ownerships.

Forest Service scientists at the Pacific Northwest Forest and Range Experiment Station have developed a biological control for the pine shoot borer, an insect that attacks pine plantations in the West and can significantly reduce tree growth. The strategy involves use of the insect's own sex attractant to confuse the male moths so that reproduction is greatly reduced. Studies showed that using less than 1/4 ounce of the pheromone per acre reduced damage in pine plantations 70 to 90 percent.

In addition to forest insect and disease research such as the foregoing, insect and disease detection and evaluation surveys were made on 636 million acres of forest lands in all ownerships during the year. Nationwide, 150 land management plans were written to include forest insect and disease management strategies. The Forest Service Manual on pesticide use was revised to include a new chapter on integrated pest management, the effort to bring silvicultural techniques, biological controls, and other methodology as well as chemical pesticides to bear upon problem insects and plants.

A total of 4.9 million acres of timber in all ownerships was treated to suppress the mountain pine beetle, southern pine beetle, spruce budworm, gypsy moth, Douglas-fir tussock moth, and western spruce budworm. About 304 million board feet of beetle-infested timber were salvaged and removed in the Southeast and West to reduce the spread of the insects. The area infested by gypsy moth was reduced to 643,500 acres during the year, less than half of the area infested in 1978.

A Forest Service-sponsored conference on urban waste wood, and the publication of the papers presented, should help in reducing the space needed for landfills and increase the amount of fiber and energy available.

Price increases for building products, and the rising value of wood on the stump, have intensified the

More effective use of the Nation's timber supply will reduce waste. Research can provide the answers needed.

search for methods to more efficiently use the Nation's timber supply. Forest Service research is showing that dead and dying timber has considerable value for pulp, particleboard, posts, and houselogs. This will help to reduce wood waste in managed forests and fire danger in dead stands as well as making considerably more wood fiber available for products.

See tables 1, 7 and 10.

Range

". . . to provide forage for domestic livestock grazing on forest and range land."

In order to meet national goals for red meat production, the Nation's public and private rangelands must be improved. Better practices must be instituted if the land is to produce more forage without declining in environmental quality. Toward this end, the Forest Service's Accelerated Range Program reached a midway point in the Oregon Range Validation Program (ORVP). The ORVP is a joint effort among eight Federal and State agencies and private landowners in the area that involves about 1.5 million acres of public and private land in eastern Oregon; it is administered by the Forest Service. This program combines work of the National Forest System, Research, and State and Private Forestry to increase the management of selected rangeland in Oregon and to analyze the effect of the actions on local environmental, economic, and social conditions.

During the past 5 years of the ORVP, pretreatment baseline data on soil and water quality, bird and small animal populations, plant cover and condition, and other ecological conditions has been gathered. There has been, or will be shortly, about 5,100 acres of brush and noxious weed control; 2,500 acres of logging slash removal; 8,500 acres of range seeding; 3,300 acres of rodent control; 520 spring and pond water developments; 2,750 acres of timber thinning; and construction of 210 miles of fence, 40 miles of livestock access trails, numerous cattleguards, irrigation systems, and riparian habitat improvements. During the next 5 years, the effect of these improvements will be analyzed and the results extrapolated nationwide to predict what actions can be used in other areas to increase range capacity while also improving the ecosystems there. The goal is to increase grazing capacity 25 percent by the year 2000.

Efforts to understand range ecosystems and control man's impact can have dramatic results. (Before & after)

Good stewardship results in good forage and a better environment.

The Accelerated Range Program is just one of many projects the Forest Service has underway to increase the productivity of the Nation's rangelands. Improved management was started or maintained on 60 percent of the 10,967 range allotments on National Forest System lands. Practices to improve forage production were started or completed on 281,300 acres of range at a cost of $983,200. In addition, Cooperative Forestry provided 500 assists to private landowners, resulting in the improvement of about 44,200 acres of forested range on private land.

The Public Rangelands Improvement Act of 1978 provided for the development of a range stewardship program to provide incentives or rewards to grazing permittees whose actions improve the range conditions on the public rangelands they lease. Three experimental stewardship areas were selected during the year and two others are being considered. This work is being accomplished in cooperation with the Bureau of Land Management.

A new, congressionally directed, formula for determining grazing fees was implemented in 1979. The formula considers grazing costs, forage value, livestock prices, and other production costs. The formula applied to National Forest grazing in the 16 Western States; it was also used to calculate grazing fees for the 17 National Grasslands in the 9 Great Plains States.

The range program for fiscal 1979 was funded at $31.9 million to produce 11.9 million animal unit months (AUM's) of forage. Accomplishment was below the target and actual grazing use amounted to 8.8 million AUM's. The general reason for this shortfall is the personal choice of permittees to graze fewer livestock because of the economic situation.

See tables 1 and 8

Assistance to owners of rangeland resulted in the improvement of more than 44,000 acres of private forested range.

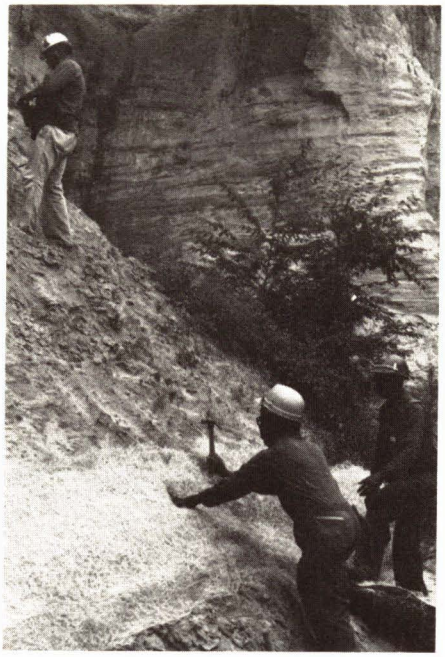
Land and Water

". . . to protect, conserve and enhance the basic resources of air, soil, and water on forest and range lands."

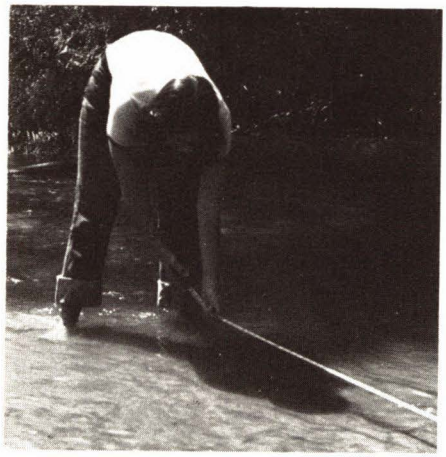
Protection of soil and water is an ongoing process—not just a one-time shot. One example of this type of effort is the Yazoo-Little Tallahatchie (Y-LT) Flood Prevention Project in Mississippi. This was the 31st year of Forest Service involvement in the project. During this year, Y-LT participants planted 9 million trees, bringing the total during the history of the project to more than 977 million trees on some 911,000 acres. As part of this Tree Cover Maintenance Program, which is designed to control erosion and provide a market crop for the landowners, the Forest Service provides management plans and harvesting advice so that wood can be harvested without imperiling the soil-holding power of the forest. In addition, more than 25,000 sediment check dams were built this year, many of them with the assistance of the Young Adult Conservation Corps and Senior Community Service Employment Program enrollees. The Y-LT Project incorporates environmental education programs, tours, school programs, and other educational measures to provide even more long-term benefits.

The foregoing are examples of the cooperative work taking place to protect watersheds and prevent floods by stabilizing critical areas through tree planting and other measures on more than 374,000 acres throughout the United States.

A major Forest Service research effort relates to ways to reclaim strip-mined land for recreation, fish or wildlife habitat, forest, forage production, or good watershed values after mining. Our scientists, cooperating with industry, other Federal agencies, and State universities, developed a minicomputer-based system for evaluating mine plans, reclamation strategies, and potential post-mining use for the land. They are also analyzing vegetation and recovery techniques for reclaiming surface-mined land.



Cooperative work to protect watersheds took place on more than 374,000 acres during the year.



Protection of soil and water is an ongoing process.

The scientists also studied the use of urban sewage for restoring soil productivity. Some results show that it increases tree growth more than regular fertilizer.

Activities to reduce the 315,000 acres of National Forest System land needing watershed improvement by the year 2000, were accomplished on 35,726 acres—slightly more than the attainment target for the year. In addition, about $500,000 was spent to rehabilitate 14 burned areas.

This year was the third worst forest fire year since 1960—wildfire burned about 445,000 acres of National Forest land. However, human-caused fires were held to 5,053, a significant reduction below the high RPA estimate of 5,856. Cooperative fire protection assistance to the States resulted in the protection of 774 million acres. On these lands, human-caused fires were held to 127,000, with a total of 1.5 million acres burned. Both of these figures represent a significant reduction from the previous year.

Fire management area plans were approved for an additional 1,885,653 acres to bring the total National Forest land under such plans to 6.7 million acres. These plans are made for certain areas so that fire can be used as a tool to help attain land management objectives, such as forage production or insect control. About 150 fires occurred in these fire management areas during the year—35 percent were confined and controlled so that the management objectives were accomplished. The remainder were aggressively suppressed as were all other fires on the National Forests. The management fires either went out by themselves or were put out when they exceeded the intensity or area specified in the plans.

Fuels that contribute to wildfire were reduced on 375,214 acres. About 10 percent of this work was accomplished by workers in the human resources programs.

Forest Service researchers developed a programed micro-chip to be used in hand-held calculators. This allows fire managers to determine quickly how a fire will behave as weather, fuel, and terrain change

About 6,660 miles of National Forest System boundary were marked and posted this year.

and how they can then more safely and effectively deploy people and equipment for control actions.

Soil inventory was accomplished for 15,530,000 acres during the year. This exceeded the work planned by 27 percent. Water resource inventories were completed on 18,056,000 acres, about 8 percent more than planned.

During the year, 15,558 operating plans for administration of mining activities from initial exploration through site reclamation for hard rock, energy, and common variety minerals such as gravel were in force. Actual area under lease for production of energy minerals, potassium, sodium, phosphate, sulphur, and some lead and zinc was 30.9 million acres, an amount within the range called for by the 1975 RPA. Energy minerals production on National Forest System lands for the fiscal year is estimated at 12 million barrels of oil, 23 trillion cubic feet of gas, and 7 million tons of coal. These figures are 29, 15, and 37 percent above the actual 1978 production figures, respectively.

The 272,000 miles of National Forest System property boundary borders some 3 million individual landowners. This year, the programed target of 5,800 miles of property boundary marking and posting was exceeded by 863 miles—673 miles of the boundary marking were completed by people in the human resources programs.

In an effort to reduce administrative costs by improving boundaries, 40,700 acres of National Forest System land were exchanged for private lands with greater public values. About 64,745 acres were acquired with $56,764,574 of Land and Water Conservation Fund money and about 11,216 acres were acquired with $2,951,765 provided by appropriations under the Weeks Act and related legislation.

The 820 miles of road constructed on National Forest System lands during the year exceeded the target figure of 626 miles; 111 bridges were also constructed. The target of 12,317 miles of roads to be constructed by timber purchasers was not met, largely because many small businesses elected late in the year to have the Forest Service construct the roads. The timber purchasers did construct 10,024 miles of roads and 195 bridges—contracts for the remaining 2,275 miles of road will be signed in fiscal year 1980.

See tables 1, 2, 9 and 11.

Receipts and Expenditures

The receipts from sale or use of National Forest System resources reflected a 16 percent increase over last fiscal year. These gains were generally caused by inflation, except for those recorded for mineral leases and permits, which were mostly the result of increased activities.

Under law, the Forest Service pays the States 25 percent of National Forest receipts to be used for the benefit of public schools and roads in counties containing National Forest lands. Based on fiscal 1979 receipts, this payment amounted to $276,984,826. Counties containing National Grasslands and land utilization areas received $1,372,224 for schools and roads (this payment is based on calendar year 1978 receipts). In addition, Arizona and New Mexico together received $202,830 and Minnesota received $675,000 under other statutes.

Money spent on obligations for the National Forests and Grasslands increased 21 percent over last year, obligations for State and Private Forestry activities increased 24 percent over last year, research expenditures increased 7 percent, and money spent on human resource programs was 3 percent more than last year.

Expenditures

National Forest System	$1,562,708,000
Cooperative Forestry	92,546,000
Research	116,830,000
Human Resources Programs	159,397,000
Total	$1,931,481,000

Receipts

Timber and Forest Products	$827,603,000
Grazing	12,520,000
Land Uses	2,117,000
Recreation	16,462,000
Power	429,000
Mineral Leases and Permits	21,878,000
Deposits for Site Restoration	193,733,000
Roads Built by Timber Purchasers	154,727,000
Powerline Licenses	614,000
Mineral Leases Paid to BLM	162,232,000
Miscellaneous	10,155,000
Total	$1,402,470,000

Appendix

Table 1 Summary of RPA Program Accomplishments
Fiscal Year 1979

Resource	Unit of measure	RPA estimates High	RPA estimates Low	FY 1979 Funded Target	FY 1979 Accomplishment[1]
Recreation visitor use	Million RVD's[2]	219.7	203.8	213.0	220.2
Wilderness maintenance	Million acres	15.2	15.2	16.3	18.1
Wildlife and fish habitat improvement	Thousand acres	870.0	810.0	795.0	974.0
Range permitted livestock	Million AUM's[3]	10.8	10.3	10.0	8.8
Timber sales offerings	Billion board feet	15.3	14.2	12.4	12.4
Silvicultural exams	Million acres	8.7	8.7	7.3	9.0
Reforestation					
Appropriated funds	Thousand acres	314.0	290.0	206.0	225.0
KV funds	Thousand acres	263.0	263.0	253.0	221.0
Timber stand improvement					
Appropriated funds	Thousand acres	674.0	622.0	312.0	324.0
KV funds	Thousand acres	272.0	272.0	161.0	153.0
Soil and water resource improvements	Thousand acres	75.0	75.0	35.1	35.7
Mineral leases and permits	Operating plans	NE	NE	15.7	11.7
Trail construction/reconstruction	Miles	980.0	980.0	1,499.0	1,848.0
Road construction					
Appropriated	Miles	2,297.0	2,197.0	626.0	820.0
Purchaser credit	Miles	8,188.0	5,558.0	12,317.0	10,032.0[4]
Fire prevention	Number human-caused fires	6,344.0	5,856.0	5,053.0	5,053.0
Fuel management	Thousand acres	440.0	111.0	360.0	375.0
Land acquired and exchanged	Thousand acres	244.4	225.6	165.2	146.1
Land line location	Thousand miles	4.3	4.0	5.8	6.7
Technical assistance—forest land					
management plans	Thousand plans	75.8	70.8	43.3	48.6
	Thousand acres[5]	5,300.0	5,000.0	3,000.0	3,500.0
Recreation technical assistance	Thousand assists	17.8	16.7	2.0	1.3
	Thousand acres	NE	NE	110.6	71.8
Wildlife and fish technical assistance	Thousand assists	38.0	35.3	3.2	5.0
	Thousand acres	NE	NE	140.0	218.9
Range landowner assistance	Thousand assists	14.2	13.9	0.7	0.5
Forest range improvement	Thousand acres	1,800.0	1,700.0	60.0	44.2
Technical assistance—timber harvesting	Million cubic feet	NE	NE	200.0	186.0
Reforestation	Thousand acres[6]	764.0	720.0	342.9	370.9
Forestry incentives program	Thousand acres	NE	NE	(182.9)	(212.0)
Timber stand improvement	Thousand acres[6]	529.0	498.0	254.5	239.4
Forestry incentive program	Thousand acres	NE	NE	(149.5)	(117.6)
Seedling production and distribution—					
State nurseries	Million seedlings	1,086.0	1,023.0	550.0	644.7[7]
Improved tree seed	Thousand pounds	NE	NE	32.0	32.6
Improved utilization	Million cubic feet[5]	327.0	302.0	180.0	157.8
Urban and community forestry					
assistance	Urban areas assisted	1,900.0	1,876.0	5,800.0	6,692.0
Insect and disease survey	Million acres	840.0	NE	493.0	636.0
Insect and disease suppression	Million acres	4.3	NE	4.6	4.7
Fire assistance—S&PF person-					
caused fires[5]	Number of fires	85,187.0	NE	145,000.0	127,000.0
Acres protected from fires[5]	Thousand acres	1,004,000.0	NE	708,000.0	774,000.0
Acres burned[5]	Thousand acres	2,100.0	NE	2,100.0	1,500.0
Receipts to Treasury	Million dollars	689.4	636.4	NF	1,402.5
Costs[8]					
Research	Million dollars	163.7[9]	151.1		110.9
State and Private Forestry		200.9[9]	185.5		80.6
National Forest System		2,033.9[9]	1,877.4		1,330.1

NE = No estimate made. NF = Not a funded target.

[1] Accomplishments by participants in the human resource programs are included.

[2] Recreation visitor-day. One RVD is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may be 1 person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

[3] Animal unit months. An AUM is the equivalent grazing of an adult cow and her calf, or five sheep, for a month.

[4] Accomplishment includes 1,179 miles turned back by timber purchasers to the Forest Service for construction.

[5] For equivalency with current planning and reporting requirements, the indicated 1975 RPA Recommended Program units of measure have been converted.

[6] Includes noncost share, FIP, and ACP.

[7] Figure reflects cooperative accomplishment for the cooperation in Forest Tree Production Tree Program and Federal technical assistance to other State tree nursery programs.

[8] Costs do not include permanent appropriations, trust funds,and allocated funds.

[9] High and low estimates inflated to make the original RPA estimates (base year 1976) compare with actual appropriations for fiscal year 1979. The inflation factor of 1.344 was used (derived from the Economic Report of the President, January 1979, Table B-3).

Table 2 National Forest System Lands Administered by the Forest Service as of September 30, 1979 (Acres)

State, Commonwealth, or Territory	National Forest purchase units, research areas, and other areas	National Grasslands	Land utilization projects	Total
Alabama	643,035	0	40	643,075
Alaska	20,159,994	0	0	20,159,994
Arizona	11,270,186	0	0	11,270,186
Arkansas	2,471,207	0	0	2,471,207
California	20,324,100	0	19,225	20,343,325
Colorado	13,802,484	612,145	560	14,415,189
Connecticut	10	0	0	10
Florida	1,094,285	0	0	1,094,285
Georgia	850,628	0	9,340	859,968
Hawaii	1	0	0	1
Idaho	20,375,432	47,659	0	20,423,091
Illinois	258,601	0	0	258,601
Indiana	183,557	0	324	183,881
Kansas	0	107,700	0	107,700
Kentucky	665,522	0	0	665,522
Louisiana	597,639	0	0	597,639
Maine	50,977	0	724	51,701
Michigan	2,714,957	0	999	2,715,956
Minnesota	2,794,985	0	0	2,794,985
Mississippi	1,140,110	0	0	1,140,110
Missouri	1,447,236	0	13,104	1,460,340
Montana	16,750,656	0	0	16,750,656
Nebraska	257,165	94,334	0	351,499
Nevada	5,143,891	0	0	5,143,891
New Hampshire	694,169	0	0	694,169
New Mexico	9,106,961	136,412	240	9,243,613
New York	0	0	13,232	13,232
North Carolina	1,158,936	0	0	1,158,936
North Dakota	796	1,104,749	0	1,105,545
Ohio	173,478	0	0	173,478
Oklahoma	246,543	46,300	0	292,843
Oregon	15,503,507	106,138	856	15,610,501
Pennsylvania	508,695	0	0	508,695
Puerto Rico	27,846	0	0	27,846
South Carolina	608,132	0	0	608,132
South Dakota	1,132,018	863,059	0	1,140,110
Tennessee	621,204	0	0	621,204
Texas	664,365	117,558	0	781,923
Utah	8,046,181	0	0	8,046,181
Vermont	271,465	0	0	271,465
Virginia	1,612,091	0	0	1,612,091
Virgin Islands	147	0	0	147
Washington	9,066,455	0	725	9,067,180
West Virginia	965,750	0	0	965,750
Wisconsin	1,496,773	0	160	1,496,933
Wyoming	8,680,728	572,359	0	9,253,087
Total	183,582,898	3,808,413	59,529	187,450,840

Table 3 Summary of Human Resource Programs
Fiscal Year 1979

Program	Funding millions	Number of persons served	Person-years accomplished	Value of work millions	Percent women	Percent minority	Percent placements	Dollar investment return
Young Adult Conservation Corps	$ 80.4	28,310	6,689	$ 89.8	37	26	—	$1.12
Youth Conservation Corps	21	12,377	1,869[1]	23.9	48	19	—	1.14
Job Corps	41	9,571	3,631	12.6	3	65	93	—
Senior Community Service Employment program	14.5	4,017	2,175	17.8	28	16	—	1.32
Volunteers in the National Forests	Unfunded	12,294	569	4.7	41	17	—	—
Others hosted	Unfunded	11,756	1,684	15.3	23	37	—	—
Total	$156.9	78,325	16,617	$164.1	—	—	—	—

[1] Converted from person-weeks data.

Table 4 Summary of National Forest Recreation Use (Thousands of recreation visitor-days[1])

Fiscal Year 1979

State or Commonwealth	Camping	Picnicking	Recreation travel (mechanized)	Boating	Games and team sports	Waterskiing and other water sports	Swimming and scuba diving	Winter sports	Fishing	Hunting	Hiking and mountain climbing
Alabama	193.6	71.5	329.5	39.4	0.7	13.5	86.1	0	76.2	213.6	50.3
Alaska	365.6	71.3	380.6	643.2	13.5	1.0	25.9	200.2	598.1	158.9	144.9
Arizona	4,038.6	863.3	3,596.0	476.6	98.6	57.6	265.7	164.1	666.9	685.8	749.4
Arkansas	551.8	169.4	523.8	129.6	14.1	27.5	209.9	0	340.3	461.2	97.2
California	14,083.6	1,250.0	13,885.8	1,307.2	266.9	267.8	1,641.8	3,781.3	3,167.4	1,423.4	2,335.0
Colorado	5,091.5	772.4	4,887.0	202.5	20.5	9.4	44.4	4,440.2	1,567.4	936.4	1,237.9
Florida	1,019.3	410.2	242.7	189.7	6.0	27.9	205.3	0	316.5	447.0	45.5
Georgia	413.6	54.5	432.2	58.4	2.9	33.4	35.3	2.1	208.5	313.8	182.2
Idaho	2,796.5	431.4	2,364.1	398.9	36.8	39.5	174.6	575.2	920.3	815.4	377.6
Illinois	143.3	52.6	158.1	26.7	3.3	4.7	22.4	0	35.3	171.1	48.6
Indiana	183.6	24.3	104.9	81.1	0	25.2	26.4	0	120.3	77.2	39.2
Kansas	1.4	6.5	18.6	0.1	0.1	0	0.1	0.1	0.5	1.8	0.5
Kentucky	366.6	119.0	674.6	359.3	7.4	64.4	42.2	0.7	234.8	175.5	239.1
Louisiana	131.0	32.8	77.9	10.0	2.7	4.2	24.7	0	45.8	92.5	43.4
Maine	16.7	3.8	11.8	0.2	1.2	0	0.1	22.8	4.3	9.3	5.8
Michigan	931.7	144.0	1,949.4	244.1	5.9	7.0	118.1	144.6	385.3	624.4	93.6
Minnesota	1,153.7	59.4	605.8	616.5	12.2	28.4	109.1	113.1	708.5	271.8	75.3
Mississippi	180.6	61.2	221.7	71.7	1.8	6.4	81.6	0	52.6	408.7	33.2
Missouri	304.7	69.9	388.6	103.8	7.7	7.4	58.5	0	87.9	242.3	59.3
Montana	1,719.7	364.7	2,160.5	186.8	26.5	33.9	74.1	551.5	711.8	753.2	411.2
Nebraska	21.1	21.7	15.5	1.0	1.9	0.1	2.1	0	7.4	27.4	10.4
Nevada	479.6	195.6	279.3	3.4	26.8	0.2	61.5	197.1	62.5	119.1	74.0
New Hampshire	559.6	60.9	309.4	4.3	1.4	4.7	37.6	310.7	21.0	30.0	577.6
New Mexico	1,349.3	492.1	974.6	18.4	24.9	0	41.2	422.9	396.5	421.7	349.7
New York	8.9	2.0	1.2	0	0	0	0	0.7	0.8	3.5	1.4
North Carolina	822.0	276.7	1,088.7	145.2	7.5	25.7	187.7	1.5	291.3	603.2	430.1
North Dakota	10.7	6.6	21.7	2.3	0.1	0	0.9	1.9	7.4	52.3	2.0
Ohio	41.1	24.0	91.8	8.0	2.2	0.4	8.2	0.4	20.2	114.6	17.3
Oklahoma	40.4	24.5	159.7	10.3	0	0.1	11.1	0	20.2	57.4	12.0
Oregon	5,277.5	648.2	3,164.1	688.1	42.0	74.1	353.2	956.4	1,311.6	1,223.5	855.8
Pennsylvania	542.2	41.3	371.0	91.4	1.4	5.8	27.2	1.4	226.8	420.6	62.1
South Carolina	156.8	48.1	255.2	67.9	11.3	12.9	13.1	0	82.1	225.7	28.1
South Dakota	288.4	58.9	1,223.2	38.4	8.1	6.7	25.5	52.9	80.0	118.8	55.0
Tennessee	526.8	172.0	381.3	71.5	10.5	20.9	117.1	0.3	123.7	191.9	126.8
Texas	336.3	39.2	203.7	67.0	0	24.6	39.9	0	851.4	164.4	19.8
Utah	3,979.5	720.1	2,612.2	228.2	75.1	21.4	104.8	591.6	1,112.1	807.4	536.9
Vermont	52.1	12.9	53.4	1.9	1.8	0	7.6	320.3	4.3	25.2	29.1
Virginia	687.7	157.8	832.1	18.8	16.9	1.5	45.2	4.3	294.7	545.6	199.6
Washington	3,747.2	355.6	2,331.7	208.3	32.0	14.2	93.8	1,342.4	696.7	961.2	910.5
West Virginia	428.4	33.5	247.8	8.2	11.8	0	15.0	0.6	155.4	217.1	75.3
Wisconsin	386.0	31.1	597.1	111.5	0.2	10.0	83.3	26.7	176.8	302.7	29.5
Wyoming	1,347.2	185.4	1,282.9	132.2	23.6	5.5	44.7	257.0	584.4	411.3	442.9
Puerto Rico	4.4	233.8	25.3	0	4.5	0	65.3	0	0	0	61.8
Servicewide	54,780.3	8,874.2	49,536.5	7,072.1	832.8	888.0	4,632.3	14,485.0	16,776.0	15,327.9	11,176.9

[1] One recreation visitor-day is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may entail 1 person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

Horseback riding	Resort use	Organization camp use	Recreation residence use	Gathering forest products	Nature study	Viewing scenes, sports, environment	VIS exhibits, talks, etc.	Total use	Percent of total
15.3	0	0	0	31.7	12.0	3.2	17.3	1,153.9	0.5
3.5	17.4	9.3	27.9	17.3	11.2	166.6	379.6	3,236.0	1.5
296.3	281.3	273.3	432.9	263.6	110.0	337.6	241.5	13,839.1	6.3
39.9	34.4	12.7	8.5	32.8	11.8	39.0	78.7	2,782.6	1.3
518.4	1,435.8	1,992.8	3,395.3	574.2	298.1	2,125.9	576.1	54,326.3	24.7
370.5	324.9	142.3	281.4	289.1	134.6	999.0	288.0	22,039.4	10.0
28.8	0	50.3	120.3	29.5	15.8	40.8	33.5	3,229.1	1.5
19.1	0	16.2	16.5	9.7	9.6	62.4	28.8	1,899.2	0.9
226.2	166.3	139.2	295.7	356.3	40.1	194.8	191.6	10,540.5	4.8
50.7	0	0	0	6.3	3.0	68.4	34.5	829.0	0.4
22.3	0	0	0	15.7	7.0	1.6	10.8	739.6	0.3
0.2	0	0	0	0.2	0.8	0	0	30.9	0
35.9	8.5	11.7	11.2	15.4	8.2	105.4	81.8	2,561.7	1.2
6.3	0	12.7	23.3	13.2	2.7	6.7	13.6	543.5	0.2
0	0	1.1	0	0.5	2.2	2.9	2.8	85.5	0
33.9	3.2	19.6	77.4	55.4	23.9	103.4	50.8	5,015.7	2.3
6.0	81.5	29.2	148.9	52.5	15.1	12.9	50.4	4,150.3	1.9
19.9	0	42.8	0	14.7	6.5	7.7	16.7	1,227.8	0.6
21.6	0	23.4	0	23.7	8.8	32.2	16.8	1,456.6	0.7
243.2	73.3	90.2	237.6	197.5	49.4	192.8	251.7	8,329.6	3.8
3.7	0	8.6	0	9.9	8.1	3.9	8.5	151.3	0.1
40.3	79.0	55.6	21.8	46.8	13.1	40.6	281.6	2,077.9	0.9
0.7	69.7	1.6	0	3.8	17.5	348.8	21.6	2,380.9	1.1
117.2	18.0	51.5	68.8	366.1	26.8	217.2	154.2	5,511.1	2.5
0.9	0	0	0	0.9	0.4	0	0	20.7	0
54.7	6.3	0	7.7	81.6	25.2	303.7	131.8	4,490.6	2.0
2.8	0	0	0	2.1	0.4	7.5	1.9	120.6	0.1
11.1	0	0	0	9.9	4.8	1.3	6.5	361.8	0.2
3.5	0	0	0	4.2	2.1	33.9	13.4	392.8	0.2
203.9	822.9	273.6	413.6	462.1	117.0	718.5	410.7	18,016.8	8.2
5.6	1.7	18.7	49.4	27.3	7.1	135.8	15.1	2,051.9	0.9
23.4	0	0	0	18.9	9.9	12.3	20.5	986.2	0.4
22.9	18.0	30.7	81.6	29.3	17.2	28.2	27.3	2,211.1	1.0
23.7	26.8	29.8	91.2	15.8	7.7	67.2	24.6	2,029.6	0.9
5.6	22.0	0	0	3.1	7.8	42.0	15.0	1,841.8	0.8
250.2	326.6	189.4	288.4	233.8	48.0	268.9	106.5	12,501.1	5.7
1.4	19.0	9.9	1.0	1.3	0.5	15.4	1.7	558.8	0.3
68.2	0.5	18.8	0.6	96.4	20.0	248.3	35.5	3,292.5	1.5
212.5	256.0	362.5	321.6	355.6	67.5	1,130.3	176.3	13,576.5	6.2
5.7	0	35.4	0.7	10.0	4.1	11.7	20.2	1,280.9	0.6
8.0	2.8	1.5	8.0	75.8	5.8	5.4	20.1	1,881.8	0.9
142.4	243.9	96.5	216.3	60.0	26.8	140.4	73.6	5,717.0	2.6
0	29.5	35.9	4.0	2.1	2.3	36.5	190.2	695.6	0.3
3,166.4	4,308.9	4,086.8	6,651.6	3,916.1	1,210.9	8,321.1	4,121.8	220,165.6	100.0

Table 5

Use of Forest Service Developed Recreation Sites Fiscal Year 1979 (Thousands of recreation visitor-days[1])

State or Commonwealth	Observation site	Play, park, sports	Boating site	Swimming site	Camp-grounds	Picnic grounds	Hotels, lodges, resorts	Organiza-tion sites	Other concession sites	Recreation residence sites	Winter sports sites	Documentary sites	Interpretive sites	Total use	Percent of total
Alabama	0	0	5.0	76.5	171.5	12.7	0	0	0	0	0	0	6.0	271.7	0.3
Alaska	54.1	11.7	7.1	13.1	374.9	63.2	17.5	13.0	0	27.9	157.4	0	145.8	885.7	1.1
Arizona	53.5	56.1	245.0	72.7	3,097.9	533.9	283.3	364.3	58.2	432.9	66.1	1.4	90.4	5,355.7	6.5
Arkansas	32.4	0	3.0	118.4	410.3	107.4	34.4	17.7	0	8.5	0	0	25.1	757.2	0.9
California	192.0	48.0	410.1	249.3	9,544.1	789.0	1,519.8	2,536.4	225.1	3,414.5	3,202.7	0.8	247.4	22,379.2	27.3
Colorado	82.6	6.6	57.8	0	3,777.9	493.3	263.6	178.0	82.2	281.4	4,301.9	20.8	60.3	9,606.4	11.7
Florida	0	0	47.5	143.0	737.4	267.1	0	90.1	0	120.3	0	2.0	14.8	1,422.2	1.7
Georgia	21.8	0	14.6	16.0	211.0	36.0	0	28.8	0	16.5	0	0	18.7	363.4	0.4
Idaho	8.5	0.6	140.4	36.4	1,880.0	184.9	164.3	184.9	9.8	290.7	486.8	21.2	117.7	3,526.2	4.3
Illinois	28.9	0	12.8	13.2	102.9	46.1	0	0	0	0	0	0.2	3.7	207.8	0.3
Indiana	0.1	0	22.6	21.8	128.9	20.9	0	0	0	0	0	0	4.2	198.5	0.2
Kansas	0	0	0	0	0	6.0	0	0	0	0	0	0	0	6.0	0
Kentucky	62.6	1.5	89.5	11.1	336.7	99.8	0	15.3	0	11.2	0	0.5	3.5	631.7	0.8
Louisiana	1.7	0	5.1	34.7	112.2	13.0	0	15.8	0	23.3	0	0	5.8	211.6	0.3
Maine	2.5	0	0	0	16.7	2.3	0	1.3	0	0	26.0	0	0.4	49.2	0.1
Michigan	32.8	5.9	151.8	88.3	696.5	135.2	2.6	25.8	0.7	77.4	96.6	2.3	14.3	1,330.2	1.6
Minnesota	2.4	0	130.9	52.7	563.6	46.5	116.0	37.6	3.3	148.9	46.9	0.8	1.6	1,151.2	1.4
Mississippi	0	0	23.5	85.8	95.3	31.0	0	47.6	0	0	0	0	2.4	285.6	0.3
Missouri	2.0	0	15.5	5.8	204.7	85.2	0	29.2	0	0	0	0.3	2.5	345.2	0.4
Montana	12.8	0	96.6	33.6	1,245.2	143.6	92.8	118.2	1.7	237.6	419.0	1.5	99.4	2,502.0	3.1
Nebraska	0.1	0	0	1.4	11.8	18.7	0	13.5	0	0	0	0.1	0	45.6	0.1
Nevada	2.8	6.7	0	51.7	413.2	132.5	0	95.2	0	22.7	202.8	0	46.8	974.4	1.2
New Hampshire	41.5	0	7.7	19.4	403.4	46.2	74.8	2.1	0	0	287.2	0	9.5	891.8	1.1
New Mexico	61.9	0	74.8	0	1,093.2	313.0	11.4	66.3	19.8	68.8	397.3	7.0	92.9	2,206.4	2.7
New York	0	0	0	0	7.0	2.0	0	0	0	0	0	0	0	9.0	0
North Carolina	90.8	0	62.9	94.7	619.0	289.6	12.5	0	0	7.7	0	0.6	60.0	1,237.8	1.5
North Dakota	0	0	0	0	11.8	0.8	0	0	0	0	0	0	0.3	12.9	0
Ohio	0	0	1.6	5.5	26.0	20.4	0	0	0	0	0	0	0.6	54.1	0.1
Oklahoma	17.9	0	5.3	8.8	26.2	14.8	0	0	0	0	0	0	4.4	77.4	0.1
Oregon	161.3	0	437.4	44.6	4,126.4	530.3	952.1	387.8	131.8	413.4	667.1	3.3	145.1	8,000.6	9.8
Pennsylvania	43.8	0.2	28.2	36.1	413.4	15.0	0	28.6	0	49.4	0	0	5.5	620.2	0.8
South Carolina	0	7.7	11.5	9.7	130.5	56.2	0	2.6	0	0	0	0.3	5.8	224.3	0.3
South Dakota	16.5	2.3	24.1	16.8	303.4	41.4	4.2	40.8	22.4	81.6	36.3	0	4.1	593.9	0.7
Tennessee	14.4	3.9	16.5	70.4	422.9	153.2	30.2	42.8	2.3	91.2	0	0.3	12.9	861.0	1.1
Texas	0.3	0	29.5	26.9	201.6	44.2	15.0	0	19.6	0	0	0	4.2	341.3	0.4
Utah	43.2	3.6	108.1	45.1	2,705.9	289.8	309.0	230.3	27.5	287.3	554.7	0.2	35.5	4,640.2	5.7
Vermont	2.1	1.5	0	13.5	39.4	5.6	9.0	11.0	0	1.0	324.9	0	1.0	409.0	0.5
Virginia	26.2	3.4	5.0	35.8	387.7	118.0	0	30.8	0.5	0.6	0	1.0	23.9	632.9	0.8
Washington	60.0	0	84.6	20.6	2,483.5	118.2	348.2	451.3	7.9	321.6	1,316.9	0.5	24.7	5,238.0	6.4
West Virginia	3.6	0	11.3	10.4	239.2	30.9	0	57.1	0	0.7	0	2.3	5.4	360.9	0.4
Wisconsin	0	0	47.3	58.8	337.2	17.6	2.1	1.1	1.1	8.0	12.2	0	6.3	491.7	0.6
Wyoming	20.4	0	73.0	14.3	974.8	88.7	257.6	136.9	4.4	216.3	236.9	0.7	31.0	2,055.0	2.5
Puerto Rico	56.3	0	0	0	0	132.0	0	65.3	29.5	4.0	0	0	109.1	396.2	0.5
Servicewide	1,253.8	159.7	2,507.6	1,656.9	39,085.2	5,596.2	4,520.4	5,367.5	647.8	6,665.4	12,839.7	68.1	1,493.0	81,861.3	100.0

[1] One recreation visitor-day is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may entail 1 person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

Table 6 Use of Forest Service Dispersed Recreation Areas (Thousands of recreation visitor-days[1]) Fiscal Year 1979

State or Commonwealth	Roads	Trails	Lakes/ponds	Reservoirs	Rivers/ streams	Oceans Great Lakes	General undeveloped area	Total use	Total use—developed and dispersed	Fiscal Year 1979 use[2] (recreation days)
Alabama	855.4	27.5	4.4	87.2	69.3	0	338.4	882.2	1,153.9	3,629,888
Alaska	824.3	135.0	105.0	0.6	109.7	1,436.1	239.6	2,350.3	3,236.0	16,968,329
Arizona	3,639.4	860.1	7.8	851.2	349.3	0	2,875.6	8,483.4	13,839.1	43,546,748
Arkansas	423.1	68.8	0	415.3	194.7	0	923.5	2,025.4	2,782.6	8,694,296
California	14,141.4	2,272.9	788.8	2,575.6	2,264.9	0	9,903.5	31,947.1	54,326.3	342,082,757
Colorado	4,911.2	1,461.1	369.1	602.7	689.9	0	4,399.0	12,433.0	22,039.4	106,905,398
Florida	270.9	25.1	393.1	13.5	180.4	0	923.9	1,806.9	3,229.1	8,371,125
Georgia	460.6	143.3	0	128.8	189.7	0	613.4	1,535.8	1,899.2	5,862,128
Idaho	2,174.8	569.9	290.6	312.4	803.5	0	2,863.1	7,014.3	10,540.5	35,389,153
Illinois	88.4	82.5	0.5	56.8	17.3	0	375.7	621.2	829.0	2,943,927
Indiana	134.7	15.9	0	193.7	21.6	0	175.2	541.1	739.6	2,244,109
Kansas	18.8	0	0	1.1	0	0	5.0	24.9	30.9	277,436
Kentucky	773.7	144.4	0	444.9	183.2	0	383.8	1,930.0	2,561.7	9,573,741
Louisiana	82.1	38.3	0	39.2	27.1	0	145.2	331.9	543.5	1,600,454
Maine	10.9	6.4	2.4	0.9	2.5	0	13.2	36.3	85.5	280,236
Michigan	1,767.0	191.3	327.4	20.4	269.1	0	1,110.3	3,685.5	5,015.7	13,751,413
Minnesota	527.3	151.6	1,175.6	5.4	187.7	0	951.5	2,999.1	4,150.3	10,975,512
Mississippi	243.0	11.0	4.8	64.6	74.9	0	543.9	942.2	1,227.8	3,512,658
Missouri	405.7	46.5	0.2	38.8	183.8	0	436.4	1,111.4	1,456.6	4,073,425
Montana	2,076.4	588.8	268.3	192.9	464.8	0	2,236.4	5,827.6	8,329.6	24,641,239
Nebraska	21.0	7.7	0	9.0	0.5	0	67.5	105.7	151.3	890,027
Nevada	508.3	73.6	9.5	2.2	54.5	0	455.4	1,103.5	2,077.9	15,254,431
New Hampshire	380.1	690.1	8.6	3.0	35.5	0	371.8	1,489.1	2,380.9	9,078,715
New Mexico	996.5	242.6	19.4	125.2	208.7	0	1,712.3	3,304.7	5,511.1	18,506,113
New York	0.7	3.5	0	0.9	0	0	6.6	11.7	20.7	57,901
North Carolina	1,111.8	291.7	9.5	159.1	395.2	0	1,285.5	3,252.8	4,490.6	17,521,440
North Dakota	24.6	0	0	7.7	5.2	0	70.2	107.7	120.6	393,313
Ohio	79.4	7.8	0	16.8	20.8	0	182.9	307.7	361.8	1,097,994
Oklahoma	175.0	5.9	0	23.5	12.2	0	98.8	315.4	392.8	1,818,494
Oregon	3,428.1	677.1	584.5	458.6	884.0	0	3,983.9	10,016.2	18,016.8	47,519,889
Pennsylvania	436.2	53.0	0	123.1	110.5	0	708.9	1,431.7	2,051.9	5,950,853
South Carolina	264.4	25.6	0.3	63.1	113.4	0	295.1	761.9	986.2	3,206,886
South Dakota	1,200.9	18.3	0	92.9	33.2	0	271.9	1,617.2	2,211.1	17,247,366
Tennessee	368.6	138.5	0	98.8	157.6	0	405.1	1,168.6	2,029.6	6,075,789
Texas	218.0	13.0	0.2	934.1	21.1	0	314.1	1,500.5	1,841.8	4,952,379
Utah	2,658.4	546.8	244.6	671.4	473.6	0	3,266.1	7,860.9	12,501.1	40,478,150
Vermont	52.3	26.3	2.1	0.9	4.9	0	63.3	149.8	558.8	1,726,252
Virginia	971.6	202.7	0	102.1	221.3	0	1,161.9	2,659.6	3,292.5	11,549,996
Washington	3,057.9	928.0	337.3	93.2	474.1	5.0	3,443.0	8,338.5	13,576.5	35,800,812
West Virginia	262.8	61.5	0.4	30.8	134.0	0	430.5	920.0	1,280.9	3,249,413
Wisconsin	542.9	70.7	217.5	15.0	84.1	0	459.9	1,390.1	1,881.8	5,166,993
Wyoming	1,192.4	458.0	263.7	111.7	324.3	0	1,311.9	3,662.0	5,717.0	24,323,780
Puerto Rico	67.5	45.3	0	0	116.2	0	70.4	299.4	695.6	4,500,680
Servicewide	50,748.5	11,428.1	5,435.6	9,189.1	10,168.3	1,441.1	49,893.6	138,304.3	220,165.6	921,691,638

[1] One recreation visitor-day is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may entail 1 person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

[2] The Heritage Conservation and Recreation Service (HCRS) has used the "recreation day" as a common basis for displaying recreation use on Federal lands administered by the seven Federal land managing agencies. A "recreation day" is defined as the presence of one person on an area of land or water for the purpose of engaging in one or more recreation activities during all or part of a calendar day.

Table 7 Timber Sold and Harvested on National Forest System Lands
Fiscal Year 1979

State or Commonwealth	Timber sold			Timer harvested	
	Sales number [1]	Volume Thousand board feet	Value dollars	Volume Thousand board feet	Value dollars
Alabama	316	72,334	$ 5,827,711	47,915	2,666,751
Alaska	19	109,101	11,191,435	430,379	1,475,188
Arizona	9,828	222,335	23,435,571	210,664	16,300,695
Arkansas	707	181,822	14,866,444	187,246	9,779,861
California	11,266	2,182,467	437,211,116	1,833,436	187,275,327
Colorado	2,125	153,703	1,104,592	127,590	1,645,546
Florida	130	97,678	4,724,998	98,838	4,042,859
Georgia	378	63,865	3,838,126	61,704	3,236,582
Idado	4,182	828,133	52,950,771	891,229	43,900,218
Illinois	48	10,036	331,386	2,207	73,949
Indiana	60	7,505	402,268	7,433	293,977
Kentucky	124	26,988	483,189	18,859	440,630
Louisiana	337	154,167	18,417,923	147,571	9,843,124
Maine	5	9,130	125,259	1,420	6,743
Michigan	780	162,627	3,029,425	173,755	2,244,774
Minnesota	307	123,001	1,755,969	145,790	1,310,321
Mississippi	562	209,315	21,731,935	194,060	14,391,519
Missouri	661	55,859	2,223,318	46,179	1,502,738
Montana	2,332	532,743	30,508,410	451,099	27,652,714
Nebraska	0	0	0	0	0
Nevada	313	914	3,025	665	2,676
New Hampshire	77	22,667	440,573	23,376	419,300
New Mexico	11,298	143,074	11,438,685	128,097	7,440,604
New York	51	223	9,211	98	925
North Carolina	1,220	47,970	1,385,996	30,816	783,839
Ohio	42	7,636	233,122	8,051	191,649
Oklahoma	99	26,094	2,607,118	13,093	524,221
Oregon	6,629	3,518,819	966,254,751	3,230,588	479,869,674
Pennsylvania	100	45,974	3,981,965	34,713	1,879,875
South Carolina	210	123,928	10,520,855	108,970	5,724,677
South Dakota	138	136,146	1,209,196	86,296	1,571,410
Tennessee	127	28,507	346,688	30,842	518,415
Texas	384	96,680	15,196,764	42,602	4,078,293
Utah	2,034	48,688	1,108,357	44,416	1,461,118
Vermont	125	11,516	296,476	7,380	139,354
Virginia	636	36,432	388,785	31,130	308,386
Washington	4,667	1,604,994	309,171,058	1,298,057	131,426,169
West Virginia	202	15,540	478,036	4,411	146,359
Wisconsin	237	114,052	1,947,671	76,793	1,053,960
Wyoming	1,305	97,700	1,435,421	99,179	2,408,511
Puerto Rico	2	12	828	7	518
Total	64,135	11,330,374	1,962,624,422	10,376,956	968,033,446

[1] Excludes sale for products that cannot be expressed in board feet.

Table 8 Grazing on National Forest Land
Fiscal Year 1979

	Permittees[1]	Cattle		Horses and Burros		Sheep and Goats		Total	
	Number	Number	AUM's[2]	Number	AUM's	Number	AUM's	Number	AUM's
Authorized to graze	—	1,579,441	8,478,802	153,921	122,522	1,945,892	1,220,192	3,679,254	9,821,516
Actually grazed									
Paid permits	15,968	1,338,606	7,671,488	14,416	56,440	1,165,046	922,693	2,518,068	8,650,621
Free use									
Recreation stock	68,535	354	92	130,740	41,532	NA	NA	131,094	41,624
Other free use	12,483	4,242	24,124	21,592	25,306	4,434	3,859	30,268	53,289
Non-National Forest System lands	230	54,427	302,987	373	4,167	31,246	26,402	86,046	333,556
Crossing	75	21,475	3,749	180	83	78,298	4,571	99,953	8,403
Unauthorized use	245	4,495	12,467	480	3,493	1,099	711	6,074	16,671
Subtotal[3]	97,306	1,369,172	7,711,920	167,408	126,854	1,248,877	931,834	2,785,457	8,770,608
Wild horses	NA	NA	NA	2,947	33,551	NA	NA	2,947	33,551
Wild burros	NA	NA	NA	163	1,471	NA	NA	163	1,471
Total actually grazed[3]	97,306	1,369,172	7,711,920	170,518	161,876	1,248,877	931,834	2,788,567	8,805,630
Losses									
Poisonous plants		1,749		1		2,087		3,837	
Predators		730		32		14,755		15,517	
Other		5,140		57		6,699		11,896	

[1] NA = not applicable.
[2] Animal unit months. One AUM is the equivalent grazing of an adult cow and her calf, or five sheep, for a month.
[3] Non-National Forest System land data not included in totals.

Table 9 Construction and Reconstruction of National Forest Roads and Bridges
Fiscal Year 1979

State or Commonwealth	Construction and reconstruction from appropriated funds			Construction and reconstruction by timber purchasers			Timber purchaser roads constructed by the Forest Service	
	Road miles	Bridges number	Dollars thousand	Road miles[1]	Bridges number	Dollars thousand	Road miles	Dollars thousand
Alabama	2	4	961	20	0	186	29	338
Alaska	4	4	10,156	368	160	32,428	0	0
Arizona	70	0	4,838	378	0	3,346	54	45
Arkansas	3	5	3,070	181	0	4,262	0	43
California	52	5	35,515	1,671	8	29,160	63	880
Colorado	30	1	7,444	276	0	2,184	21	94
Florida	4	4	987	56	0	778	16	260
Georgia	17	0	1,636	35	0	667	0	0
Idaho	186	15	23,956	729	0	15,044	90	1,728
Illinois	1	1	335	14	0	60	0	0
Indiana	4	0	428	1	0	2	0	0
Kentucky	8	1	1,291	24	0	416	3	44
Louisiana	3	3	1,257	49	3	1,521	13	250
Maine	0	1	153	3	0	163	0	0
Michigan	7	6	1,604	60	0	246	0	0
Minnesota	12	6	1,549	57	0	410	3	0
Mississippi	0	3	1,312	185	0	1,933	8	137
Missouri	4	0	459	35	0	163	0	0
Montana	180	19	24,831	787	7	16,897	91	1,281
Nebraska	0	0	28	0	0	0	0	0
Nevada	0	0	206	0	0	0	0	0
New Hampshire	1	2	547	17	0	268	2	0
New Mexico	8	0	2,970	211	0	1,570	63	940
New York	0	0	0	0	0	0	0	0
North Carolina	25	2	2,354	52	0	822	0	0
North Dakota	0	0	20	0	0	0	0	0
Ohio	0	0	61	0	0	0	0	0
Oklahoma	1	0	50	12	0	264	0	0
Oregon	18	3	30,556	2,533	11	70,290	360	11,590
Pennsylvania	1	2	544	31	0	610	2	0
Puerto Rico	0	0	0	0	0	0	0	0
South Carolina	22	2	1,938	131	0	2,342	10	180
South Dakota	0	0	1,850	105	0	1,035	42	122
Tennessee	28	0	1,675	33	0	490	1	38
Texas	9	2	1,138	49	0	1,119	21	382
Utah	17	2	4,160	38	0	1,044	30	37
Vermont	3	2	449	6	0	62	0	0
Virginia	35	0	3,058	18	0	179	0	0
Washington	10	1	15,146	514	5	25,570	185	6,997
West Virginia	22	3	3,037	13	1	429	0	0
Wisconsin	30	5	1,616	39	0	260	7	0
Wyoming	3	7	1,611	132	0	1,595	65	12
Total	820	111	194,796	8,863	195	217,815	1,179	25,398

[1] Does not include 1,179 miles turned back to the Forest Service for construction. Includes $9,122,765 carryover from FY 1978.

Table 10 Summary of Selected Cooperative Forest Management and Processing Program Activities by State

Fiscal Year 1979

State, Commonwealth, or Territory	Assists to woodland owners	Area of woodland involved	Area receiving[1] planting and TSI assistance	Timber sale assistance—Volume marked	Assists to loggers and processors	Improved utilization	State nursery production
	number	acres	acres	board feet (thousands)	number	cubic feet (thousands)	trees (thousands)
Alabama	9,760	267,335	56,228	30,177	252	5,474	71,913
Alaska	134	29,400	8,400	48,000	21	2,000	300
Arizona	179	3,390	564	604	7	42	0
Arkansas	2,078	113,047	19,773	3,043	200	2,515	9,768
California	3,937	44,286	17,506	8,847	171	7,023	4,277
Colorado	7,741	51,903	6,677	7,121	318	2,589	1,874
Connecticut	1,673	27,216	3,726	2,804	13	119	2,176
Delaware	1,105	10,536	551	3,600	58	217	301
Florida	3,746	265,494	20,597	3,658	913	3,162	21,724
Georgia	17,178	661,503	27,064	19,919	518	11,219	47,222
Guam	81	53	31	0	0	0	23
Hawaii	608	33,473	473	543	56	1,230	371
Idaho	533	8,512	1,441	5,315	125	171	659
Illinois	1,873	27,113	4,752	8,932	52	600	5,593
Indiana	3,370	117,136	13,362	11,287	381	4,367	4,300
Iowa	2,969	23,026	3,048	2,543	301	1,920	1,984
Kansas	1,943	34,542	1,998	4,310	178	482	1,073
Kentucky	3,463	105,613	5,652	19,338	153	2,289	14,533
Louisiana	2,477	160,073	19,721	9,705	19	426	77,500
Maine	2,989	43,224	7,324	8,976	1,737	3,685	2,174
Maryland	2,942	27,610	4,187	4,929	272	2,703	2,783
Massachusetts	3,024	167,073	9,890	27,215	161	2,088	0
Michigan	2,386	94,705	14,744	7,219	32	904	6,707
Minnesota	4,928	71,766	16,626	14,267	151	3,312	12,000
Mississippi	7,522	288,274	55,581	15,907	593	40,808	58,313
Missouri	2,839	140,042	11,840	38,910	768	1,557	10,564
Montana	544	11,121	2,162	35	140	1,959	1,646
Nebraska	792	4,626	745	1,291	7	0	3,200
Nevada	304	2,513	502	0	3	131	120
New Hampshire	4,853	70,765	7,716	6,483	334	3,182	652
New Jersey	1,654	47,384	3,245	2,267	643	1,895	433
New Mexico	564	24,196	1,236	407	21	977	7
New York	4,791	135,254	13,290	30,542	692	3,430	7,588
North Carolina	11,677	509,508	45,295	90,474	92	1,022	56,900
North Dakota	617	15,485	299	130	23	22	3,720
Ohio	3,601	84,456	10,394	19,209	60	2,502	6,012
Oklahoma	536	18,575	3,089	746	9	9	5,543
Oregon	10,950	229,301	25,636	51,514	53	5,494	28,000
Pennsylvania	1,641	37,036	7,510	2,049	185	1,189	5,618
Puerto Rico	1,670	1,670	1,434	0	12	0	545
Rhode Island	146	3,936	451	127	0	0	0
South Carolina	10,400	283,220	29,119	32,739	30	2,996	41,663
South Dakota	646	11,257	271	7,224	0	0	771
Tennessee	5,125	124,528	3,605	36,102	39	646	15,110
Texas	2,341	163,360	24,399	13,647	19	5,119	20,748
Utah	315	19,267	284	3,013	89	1,086	170
Vermont	4,325	30,020	5,369	24,389	87	3,621	240
Virginia	14,178	403,405	41,231	28,177	792	3,100	51,743
Virgin Islands	22	59	42	0	0	0	8
Washington	1,935	79,125	8,783	42,598	215	10,816	17,350
West Virginia	2,000	43,840	13,856	14,370	198	4,293	4,885
Wisconsin	6,286	172,063	28,266	36,455	39	299	13,918
Wyoming	194	38,795	240	3,944	161	3,063	0
Total	183,585	5,382,230	610,235	755,103	11,393	157,753	644,722

[1] Includes both areas receiving technical assistance only and technical assistance as a part of cost-sharing through FIP and ACP.

Table 11 Wildfires on State and Private Areas Protected Under the Cooperative Forestry Assistance Act (P.L. 95-313), Section 7

Calendar Year 1978[1]

State, Commonwealth, or Territory	Area protected	Human-caused fires	Human-caused area burned
	Thousand acres	Number	Acres
Alabama	25,029	9,562	343,902
Alaska	22,052	256	822
Arizona	18,328	158	5,724
Arkansas	20,698	3,627	63,555
California	33,325	10,420	128,721
Colorado	23,416	287	6,291
Connecticut	2,390	1,401	2,453
Delaware	557	23	60
Florida	26,243	6,330	78,973
Georgia	27,279	16,153	61,803
Guam	82	1,010	7,539
Hawaii	3,306	401	17,308
Idaho	7,126	247	10,891
Illinois	8,453	40	539
Indiana	7,328	94	622
Iowa	7,612	620	3,205
Kansas	19,792	1,572	79,287
Kentucky	17,026	1,819	38,018
Louisiana	20,939	8,012	92,505
Maine	17,743	1,132	3,135
Maryland	3,700	581	1,390
Massachusetts	3,581	9,525	8,881
Michigan	19,675	713	2,622
Minnesota	22,830	1,066	15,814
Mississippi	19,858	9,850	123,744
Missouri	15,696	2,159	13,833
Montana	19,147	139	364
Nebraska	27,154	1,465	16,582
Nevada	8,777	126	1,514
New Hampshire	4,631	1,561	626
New Jersey	2,705	1,451	5,103
New Mexico	40,199	231	2,296
New York	16,958	766	7,119
North Carolina	20,817	4,579	35,795
North Dakota	13,294	311	8,894
Ohio	5,823	433	1,144
Oklahoma	5,087	1,761	48,821
Oregon	13,029	506	5,007
Pennsylvania	19,541	1,134	5,086
Puerto Rico[2]	0	0	0
Rhode Island	512	726	736
South Carolina	13,289	9,287	40,599
South Dakota	25,816	404	47,624
Tennessee	12,478	4,273	44,329
Texas	22,123	3,474	48,020
Utah	14,724	296	1,492
Vermont	4,638	155	176
Virginia	18,518	3,184	9,849
Virgin Islands[2]	0	0	0
Washington	13,177	572	4,221
West Virginia	12,833	1,529	31,729
Wisconsin	18,898	1,214	1,616
Wyoming	25,540	430	3,842
Total	773,772	127,245	1,484,221

[1] Fire statistics are collected on a calendar-year basis in cooperation with the States and other Federal agencies. Calendar year 1979 figures will be available by June 1980.

[2] Not included in program in calendar year 1978; no statistics available.